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Introduction

V-Player is a compact, versatile HD video player based on Linux. The device is controllable and can be administrated completely via network. Media content can be added via Drag and Drop using the free of charge V-Player Manager Software. Alternatively, a user preferred FTP client can be used do copy the content to the Player, as well as attaching USB drives (FAT, NTFS and HFS formats are supported) .

One of its outstanding features is its self synchronizing capability. In a group of V-Players, define one machine as master and all others as slave, and all player will play the video in sync together (± 20 ms). You can have as many slaves as your network has IP addresses (250 in an IPv4 class C network). Best synchronization results obtained with Quicktime H264 (approx. 15 MBit) with AAC (Advanced Audio Codec) or mp4 files. The Audio settings should be 48 kHz, 16 Bit Stereo. Multichannel digital sound via HDMI can be played as well.

V-Player comes with an integrated software EDID manager. If V-Player is connected to a device without EDID (e.g. matrix switch, LED processor, projector or fiber transmitter), an internal EDID can be used with no need to connect an external hardware EDID manager / detective.

For an easy installation on site, V-Player is delivered with a stand and standard VESA mount. Because of its small form factor, the device can be mounted direct at or nearby the display. As infrastructure, only a power cable and an Ethernet connection is required. No fiber optics or high quality video cables for long distance video distribution is needed.

V-Player can run stand alone, in a master / slave group, or be controlled by (show) control systems such as Medialon, V-Control, Crestron or AMX. In addition, we have the USB controller V-IO to control V-Player by sensors and buttons.

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Technical Specification

We use different Hardware platforms for our Players. They all have in common that they are working with an Intel Atom Dual Core processor in combination with NVidia ION.

Video Player	
Video Formats (SD)	(S)VCD (Super Video CD), MPEG-1/2 (ES/PS/PES/VOB), AVI, ASF, QT /MOV / MP4, Ogg / OGM files, Matroska, yuv4mpeg
Video Formats (HD)	MPEG-2 (PS/VOB,TS), MOV (H264), MP4 (H264)
Video Resolution s	320x240 to 768x576 and 1280x720, 1360x768, 1920x1080
Synchronous Playout Format	Video: MPEG4, Quicktime (VC1 and H264) / Audio: AAC (Advanced Audio Codec) 48 kHz 16 Bit Stereo, MP3
Video Codecs	MPEG-1 (VCD), MPEG-2 (SVCD/DVD/DVB), MPEG-4 ASP incl. DivX, OpenDivX (DivX4), DivX 5 (Pro), Xvid, MPEG-4 AVC aka H.264, DV video, MJPEG, FLI / FLC Because of Microsoft's license policy, we do not support WMV and WMA video and audio codecs. The user can add WMV and WMA support by adding the files wma9dmod.dll, wmadmod.dll, wmv9dmod.dll, wmvadvd.dll and wmvdmod.dll to /usr/lib/codecs directory. **This demands a valid license from Microsoft.**
Audio Codecs	MPEG layer 1, 2, and 3 (MP3) audio, DivX Audio v1, v2, AAC
Multichannel Audio	Ac3 and DTS, output via HDMI
Audio Output	3,5 mm Stereo (analog) / HDMI
Video Output	HDMI, DVI or VGA

Control with V-Player Manager

One of the outstanding features of V-Player is it's remote control capability. V-Player itself has only a very limited GUI. To operate V-Player, we have V-Player Manager, a software that has a full featured GUI for V-Player. V-Player Manager runs on Windows, Linux and MAC OSX and connects to V-Player via network.
V-Player Manager is the user interface for V-Player. Usually, it is installed on a separate PC to control one or more V-Player boxes. This has some very important advantages compared to media players with a build in GUI. You can rearrange the play list or edit clip parameters during playback. The output screen still shows the running video. There is no need to connect via VNC (but still possible), which would be visible on the output screen. If desired, V-Player Manager can run on the V-Player box and connect to V- Player via local host.

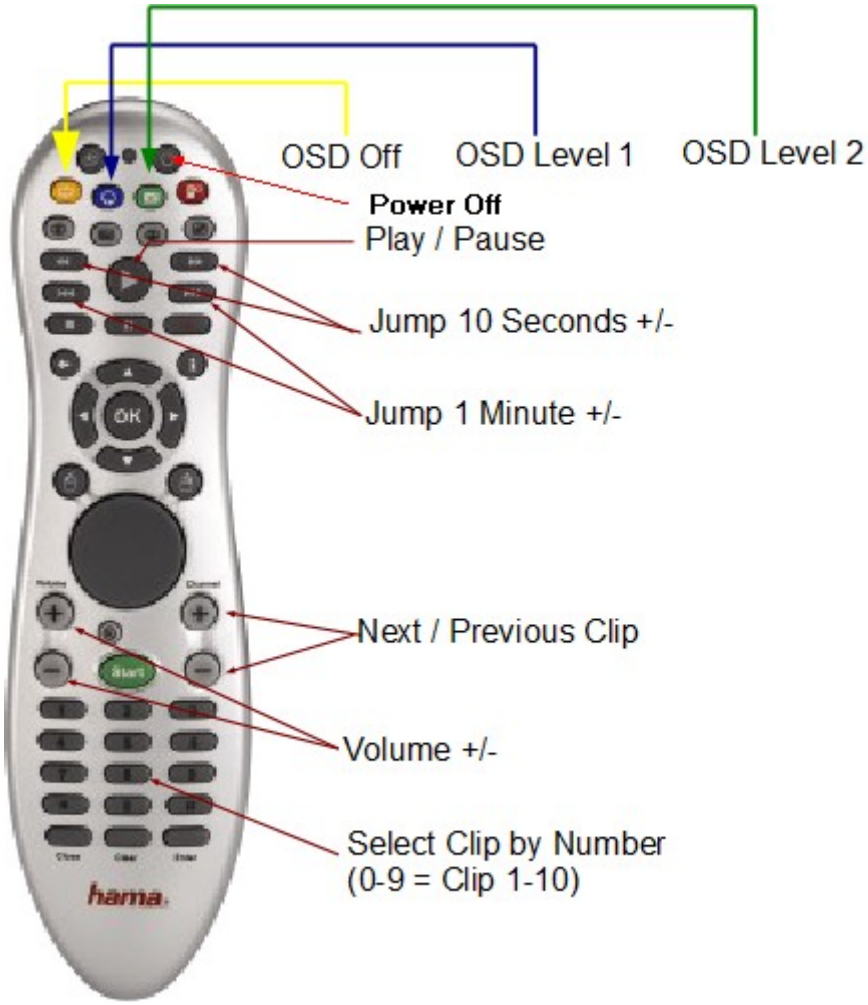
V-Player Manager can be downloaded from our Website www.vman.cc, but is also available in a folder of V-Players home directory for all supported operating systems. Use ftp or a USB thumb to get the software for your operating system.
In most cases V-Player Manager is needed only during setup. Once the play lists are created and master / slave devices are configured, the master device controls the playback. If V-Player is configured as stand alone device, it controls the playback by itself.

External Controllers

There are scenarios where an external controller is needed. V-Player can be integrated in any show control system that is capable to send and receive commands via UDP or RS232. Because V-Player has no RS232 port, an additional USB-RS232 adapter is needed if UDP is not used (or use a controller with integrated USB - RS232 converter like V-IO). We have customers working with V-Player in a Crestron, Medialon or V-Control environment. The (show) control system can not only cue videos and load play lists, it is also possible to request the current position in the video as Timecode and other status information.
If you want to control the playback by sensors or push buttons, you can use V-IO or any other micro controller that offers I/O ports and RS232 or UDP communication. The advantage of V-IO is, that it is USB powered and connects direct to one of V-Player USB ports. An extra USB-RS232 adapter is not needed.

V-IO has 12 I/O ports on the rear side. All of them can be used as digital input. Six of them can be used alternatively as analog input. In a master / slave group, only the master needs to be connected to the V- IO interface. V-IO can be programmed with the open source Arduino IDE in a language that is similar to Java (Processing). For standard scenarios V-IO can be ordered to play up to 12 clips on a V-Player triggered by external sensors or buttons.

Control with MCE Remote



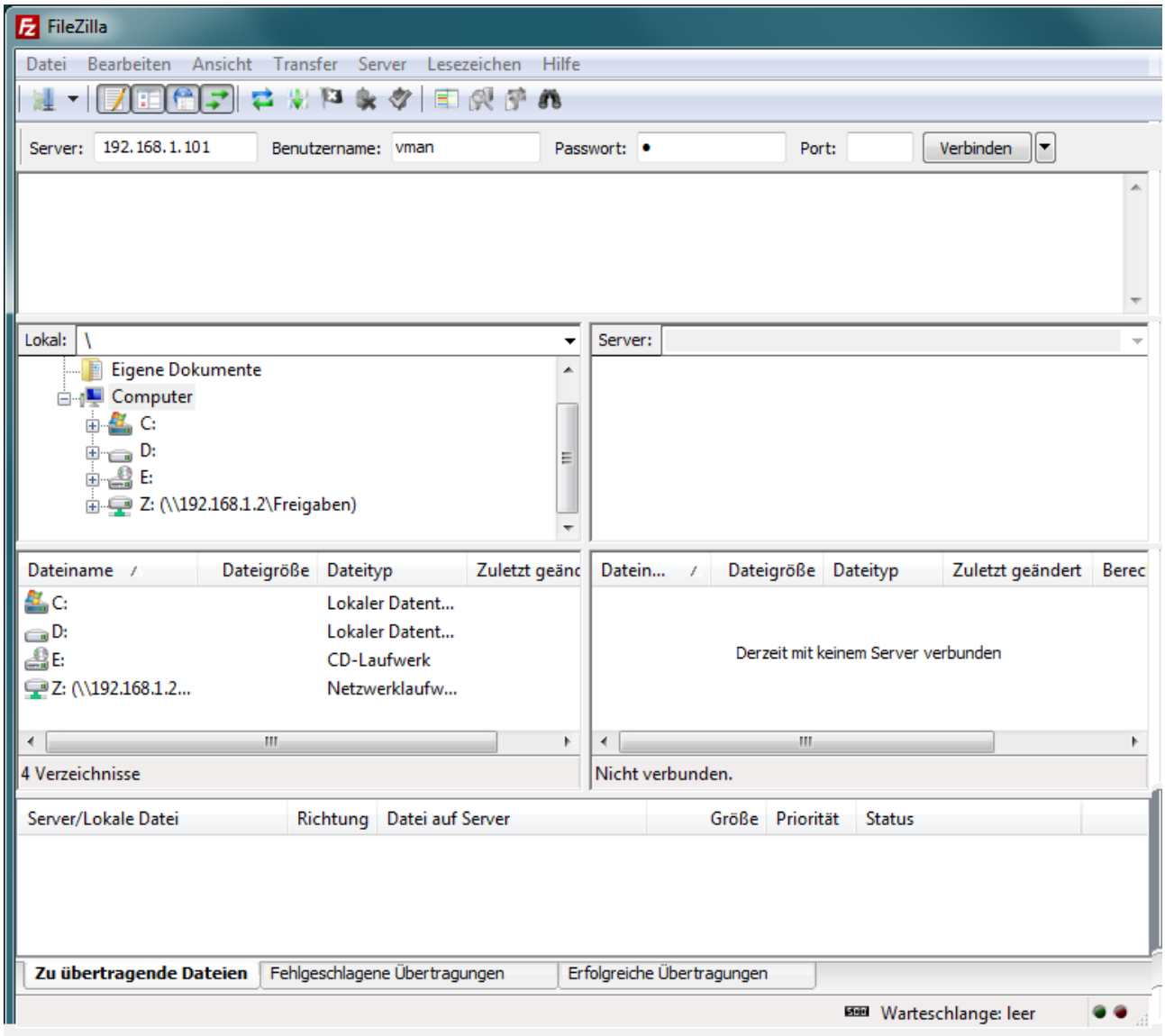
In addition, a standard USB keyboard connected to V-Player can be used for some basic control.

Key	**Function**
x	Skip 1 minute
y	1 minute back
n	Skip 10 seconds
v	10 seconds back
Space	Toggle Play/Pause
+	Volume up
-	Volume down
PageUp	Next Clip
PageDown	Previous Clip
0..9	Play Clip 1 - 10
a..d	Play Clip 11 - 14

FTP and VNC

There are a variety of ways to transfer the video content to V-Players build in Hard disk. We recommend to use V-Player Manager (see Playlist), but a common way is to use one of the USB connectors and transfer the content from a USB drive. However, in large installations with many V-Player boxes it might be more comfortable to use FTP. You can use any FTP client (e.g. Filezilla, an open source ftp client) to copy the content to V-Player. Thanks to its build in GBit Ethernet, transfer rates up to 80 MB/s can be expected (depending of the network infrastructure).

To Connect to V-Player by FTP, enter the IP address of the V-Player box in the FTP clients address field. **The username is vman, the password is x.**



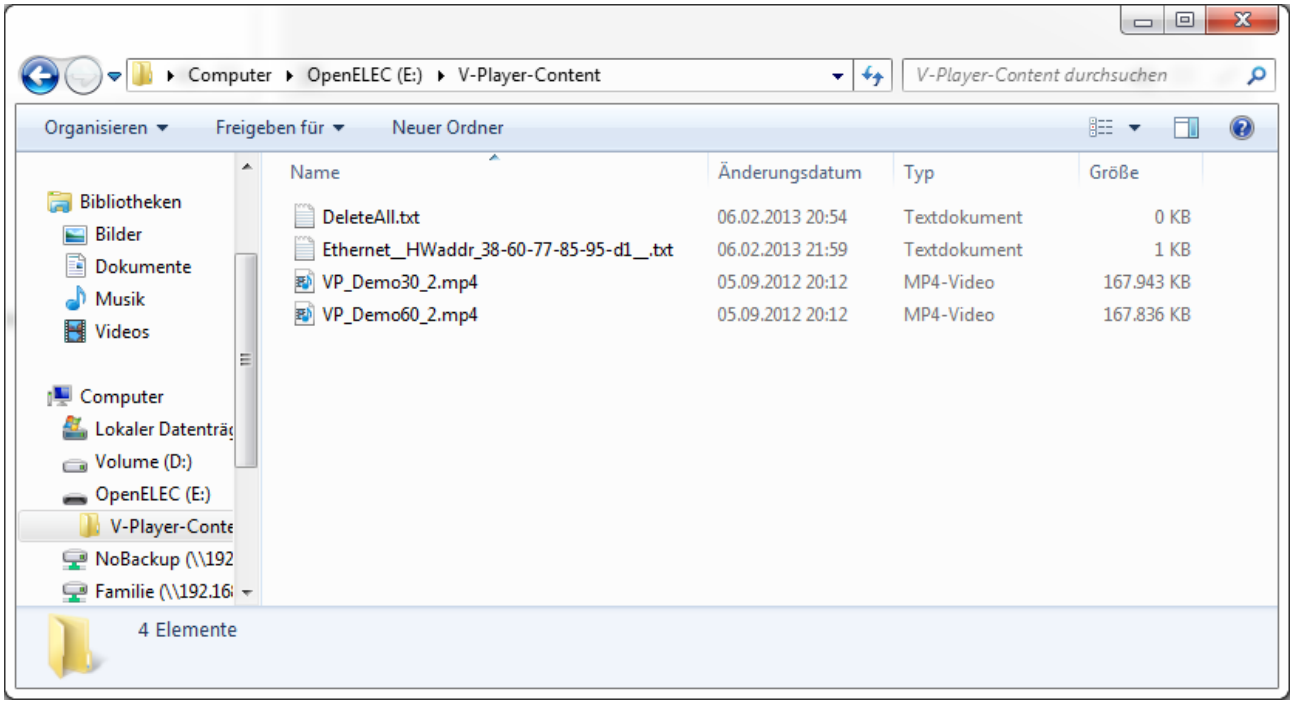
In addition, you can connect to V-Player via VNC to access the V-Player Desktop.

USB Auto Update

One of the easiest way to update the content of a V-Player is to use the USB Auto Update function. To use this functionality it is necessary to prepare a USB thumb drive or hard disk that V-Player recognizes it as new content.

- Create a folder named "V-Player-Content" in the root directory of the USB drive
- copy all content files in this folder
- The files are played back in alphabetical order later. This allows to determine the playback order by file names.

Once this USB drive is attached to the Player, it can take up to 10 seconds until the Player recognizes the new content. The Player will terminate and the new content is copied to the internal storage of the V- Player. It automatically generates a playlist with the new content and start again.

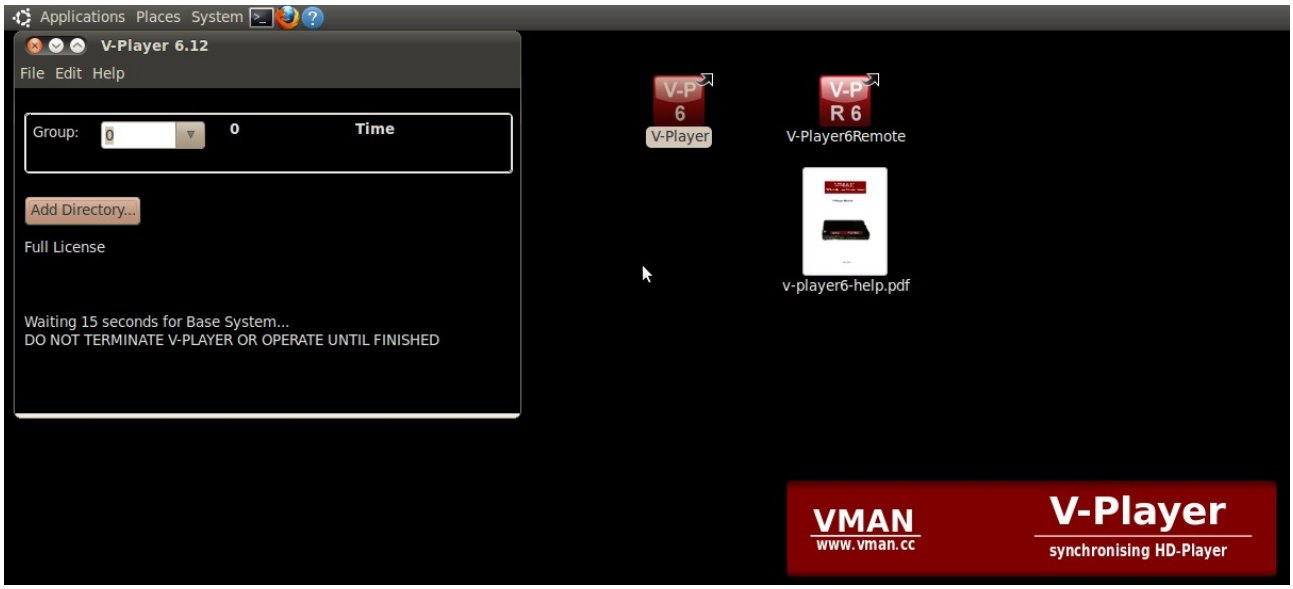


If the Player has copied the content it creates a file in the V-Player-Content directory that contain its MAC Address in the file name (see screen shot above "Ethernet Hwaddr 38-60-77-85-95-d1 .txt). This file is used to indicate that this particular machine has updated already. It will not update again, even if the content has changed, as long as this file exists. However, other machines with different MAC addresses will import the content and place their own signature in this directory.

If the USB Auto Update process is done very often it will lead to a full internal storage (depending of the content size, frequency and internal storage size). To prevent this, it is possible to set a delete flag that deletes all previous content before the new content is copied. To set this flag place a file named "DeleteAll.txt" in the V-Player-Content directory of the USB storage device. The content of "DeleteAll.txt" is irrelevant, it just has to be there to set this flag.

V-Player Desktop

As explained before, V-Player is a Linux based box and in fact nothing else than an ordinary PC with HDMI video output. To configure V-Player (e.g. IP Address) you can use standard (Ubuntu) Linux commands. By default, the Desktop is accessible via VNC, but feel free to connect a USB keyboard and mouse to use the box like any PC.
V-Player is in the list of startup programs and will launch automatically if the box is switched on. After startup, it will wait 15 seconds for the rest of the system to complete the boot process. This is indicated by a message. During this time, V-Player can not operate and will not respond on remote commands.



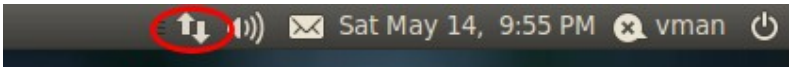
In addition to V-Player, V-ControlRemotePC is started as well. This software is used to control parts of the operating system e.g. start an application on the V-Player box.
A running instance of V-ControlRemotePC is indicated in the top status bar, which shows a list of all running applications.

Exit Full Screen Mode

By default V-Player starts in full screen mode, so you will not see the Desktop if V-Player has been finished its boot process. To exit full screen mode, use the V-Player Manager Software.

Setup IP Address

Usually it is not necessary to work on the Desktop, until you need to change the IP address or some rare used preferences. In this case you can connect to V-Player via VNC or have a keyboard and mouse connected to the box. By default, V-Player comes with a fixed IP address that is labeled on the device.



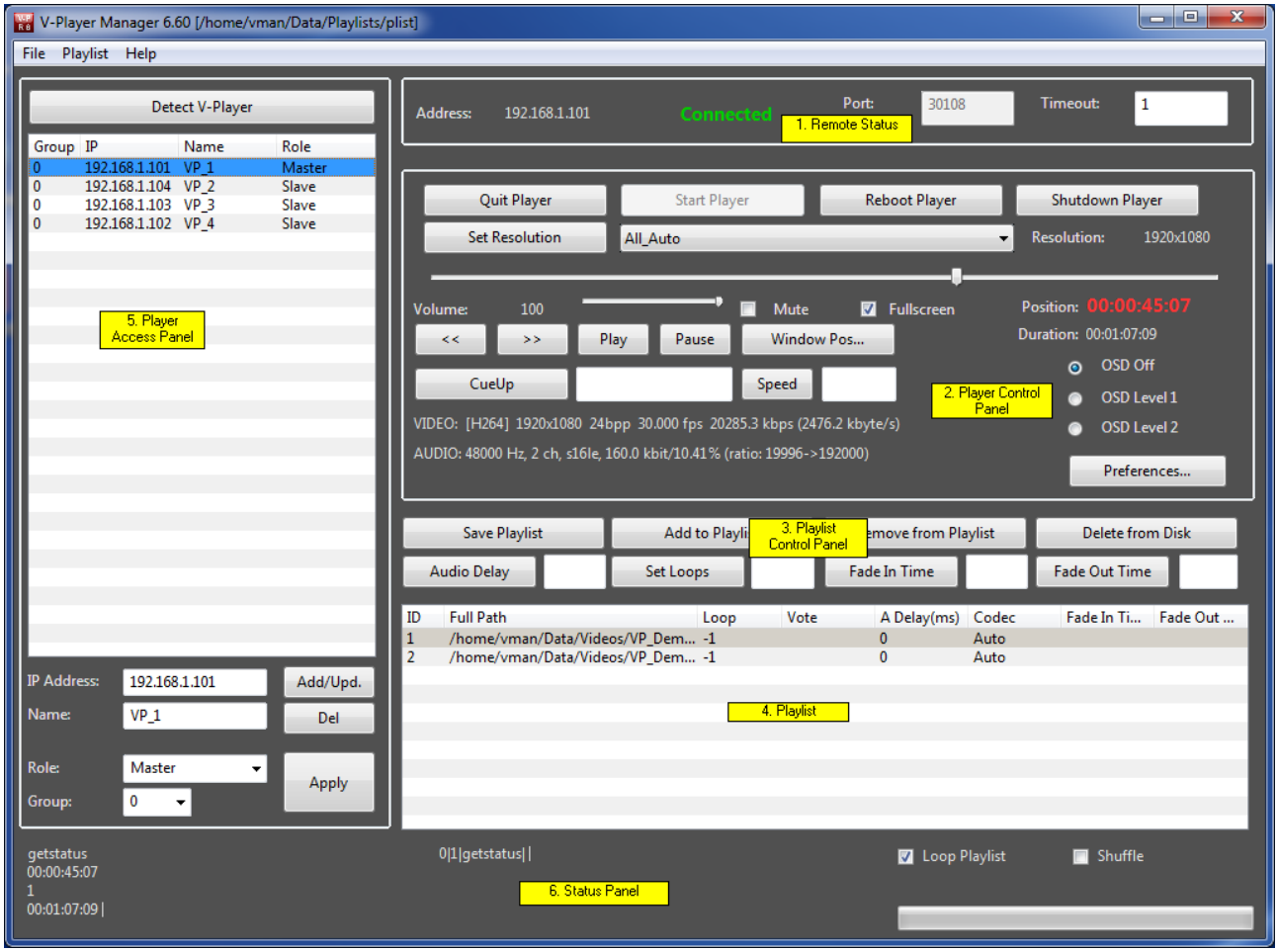
If desired, the IP address can be changed by right clicking the two arrows in the top menu bar of the screen (see the red circle). In the menu select "Edit Connections..." A list of network interfaces is shown. Select the "Wired" tab and choose the network interface (usually eth 0).

Next click the "Edit..." button to change the IP address.

After changing a value (e.g. Address) press the ENTER or RETURN key on your keyboard. If finished, click the "Save" button. If done, reboot the player by clicking the top right symbol and select "Reboot"

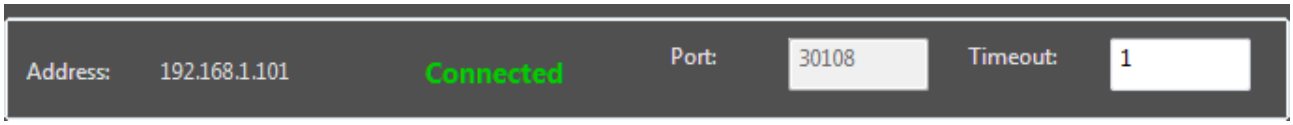
V-Player Manager

As described before, V-Player Manager is used to setup or operate V-Player. V-Player Manager is a peace of software that usually runs on a separate PC. It connects to V-Player by TCP and can be used to control one or multiple V-Player boxes. V-Player Manager is divided into 6 separate function groups:



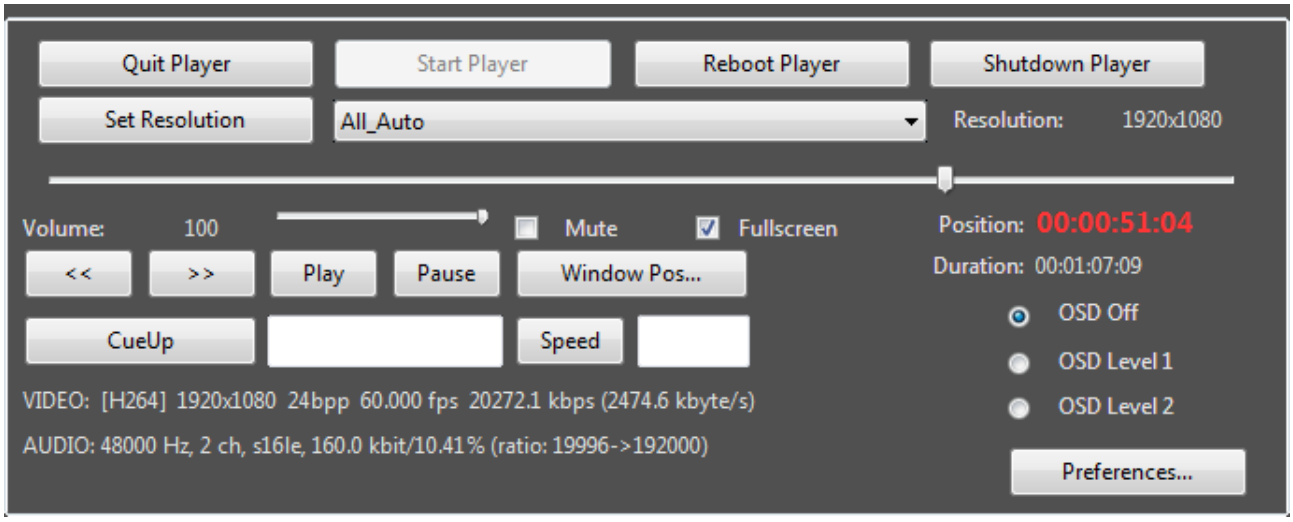
1. **Remote Status:** Shows the current status of the IP connection.
2. **Player Control Panel:** This panel is used to control the connected player directly
3. **Playlist Control Panel :** Edit the Playlist here
4. **Playlist :** Shows the corrently loaded Playlist. New content can be uploaded to the Player by dropping the video files here.
5. **Player Access Panel :** Manage V-Player in your network
6. **Status Panel:** Status messages

Remote Status



This status panel shows information about the current connection to a Player. The Player is identified by its IP Address shown in the field "Address".

Player Control Panel



Most of the GUI elements of this panel should be self explained. The most uncommon command buttons are described below.

Quit Player

Terminates the V-Player application, the operating system is still running. This is useful if one need to work with the Desktop e.g. to change the IP Address or copy files from a USB device.

Start Player

Start the V-Player application if used the "Quit Player" button before. ATTENTION: Do not start a second instance of V-Player. If V-Player Software is running, don't press this button.

Reboot Player

Reboots the V-Player box

Shutdown Player

Shutdown the V-Player box

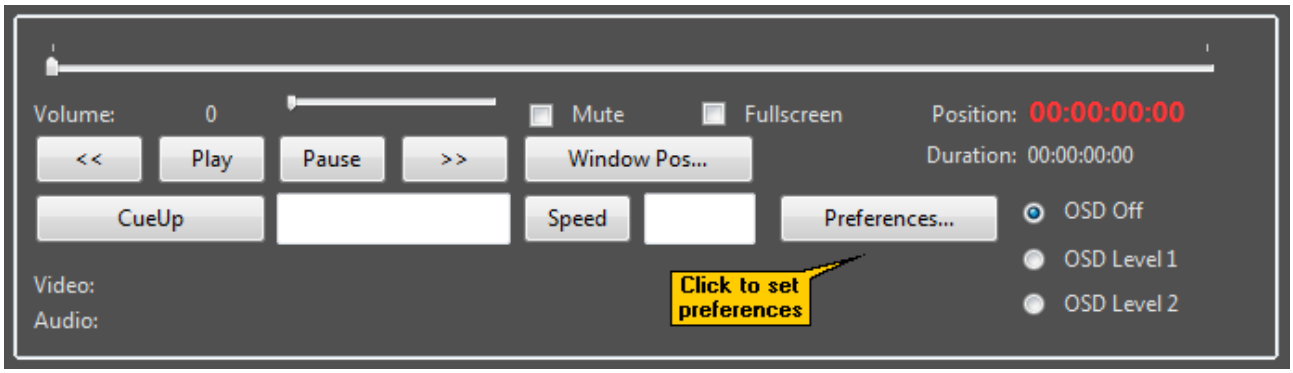
Set Resolution

If set to "ALL_Auto", which is the default setting, V-Player uses EDID information from the connected display to set the best screen resolution. **Some devices like projectors or matrix switches may not provide any EDID, in this case the video output of V-Player will be disabled AND V-Player will not start .** If that happens, connect V-Player to a display with EDID and reboot (press the power button, wait until shut down and press the power button again). In the drop down box right of the "Set Resolution" button select the output (HDMI / VGA) and resolution / refresh rate you want to use. Then press the "Set Resolution" button. V-Player reboot and the output is forced to what have been selected, no matter what EDID is provided or if none is provided..

Preferences

In many cases it is not necessary to touch the preferences, but because of V-Players flexibility it provides some more options we don't want to see in the main interface to keep the usage simple. See the Preferences section in this manual for more information.

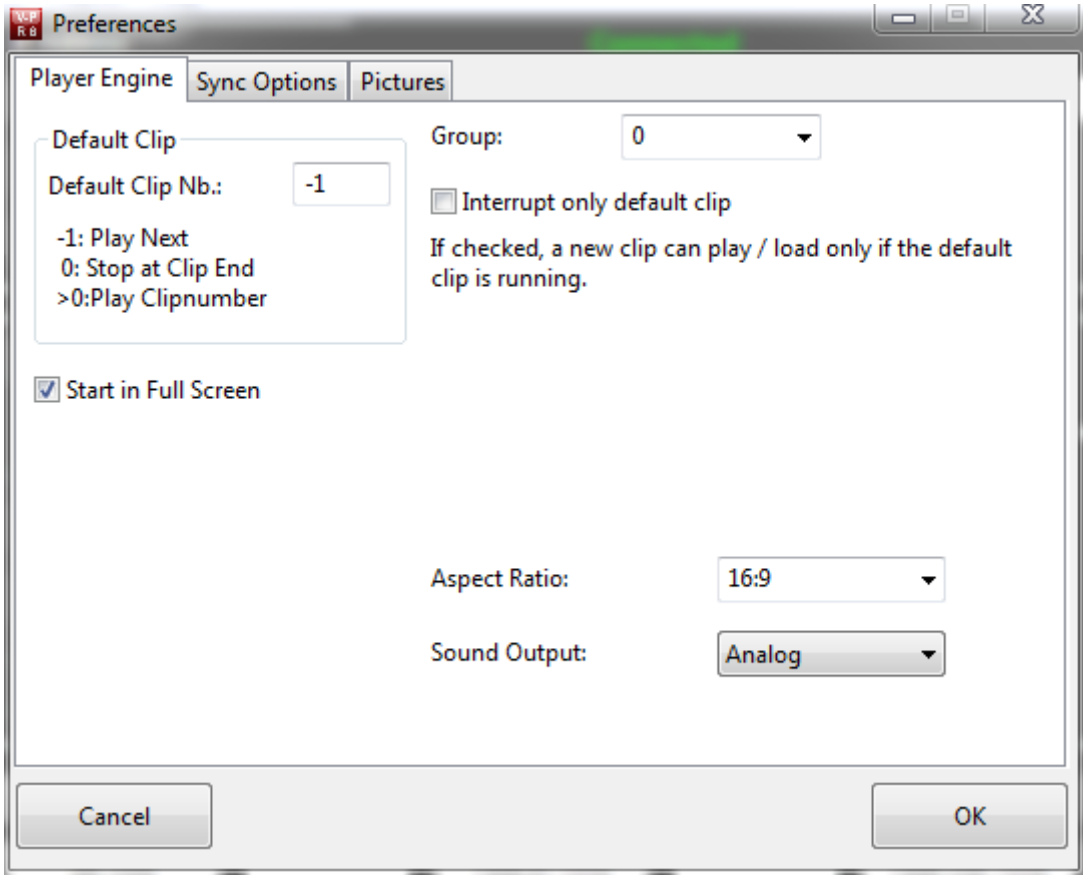
Preferences



If connected to a V-Player, click the Preferences... button in the Player Control Panel.

This leads to the following screen (see next page):

Player Engine



Default Clip

Determines which clip is played if the previous one is finished. A value of 0 does nothing, the player stops at the end an shows the last frame. This is the correct setting for Players in Slave mode. A value of -1 causes V-Player to jump to the next clip in the play list. If there are no more clips, and the Loop Play list option is set, V-Player jumps to the first clip in the play list. A value >0 plays the clip with the given number by default. This is very useful in e.g. museum installations, where the visitor can select a video by pushing a button. If the selected video is over the player jumps to the default clip. **Note: If the player is set to slave mode, this value has to be 0.**

Group

If multiple V-Player are in the same network, but should be used independently or split into groups, this value can be used to set the Player in the desired group. All V-Player respond to commands that are sent to their group only. If, e.g. a player in group 3 receives a command for a player in group 1 it will not perform the command. **Note: All players will respond to commands sent to group 0 !**

Interrupt only default clip

If this is checked, a new clip can be played only if the default clip is running or if the new clip is the default clip. This is useful, for example, if a V-IO with PIR or radar sensor is connected to V-Player to detect people in it's scope. As soon as a person is detected, the V-IO fires a command to play a clip (which is not the default clip). If the sensor fires again, but the clip fired before is still playing,

it will not interrupt the clip. If the clip is finished, V-Player will play the default clip, which is the only clip that is interrupt able.

Start in Full Screen

Forces the full screen mode at startup, checked as default.

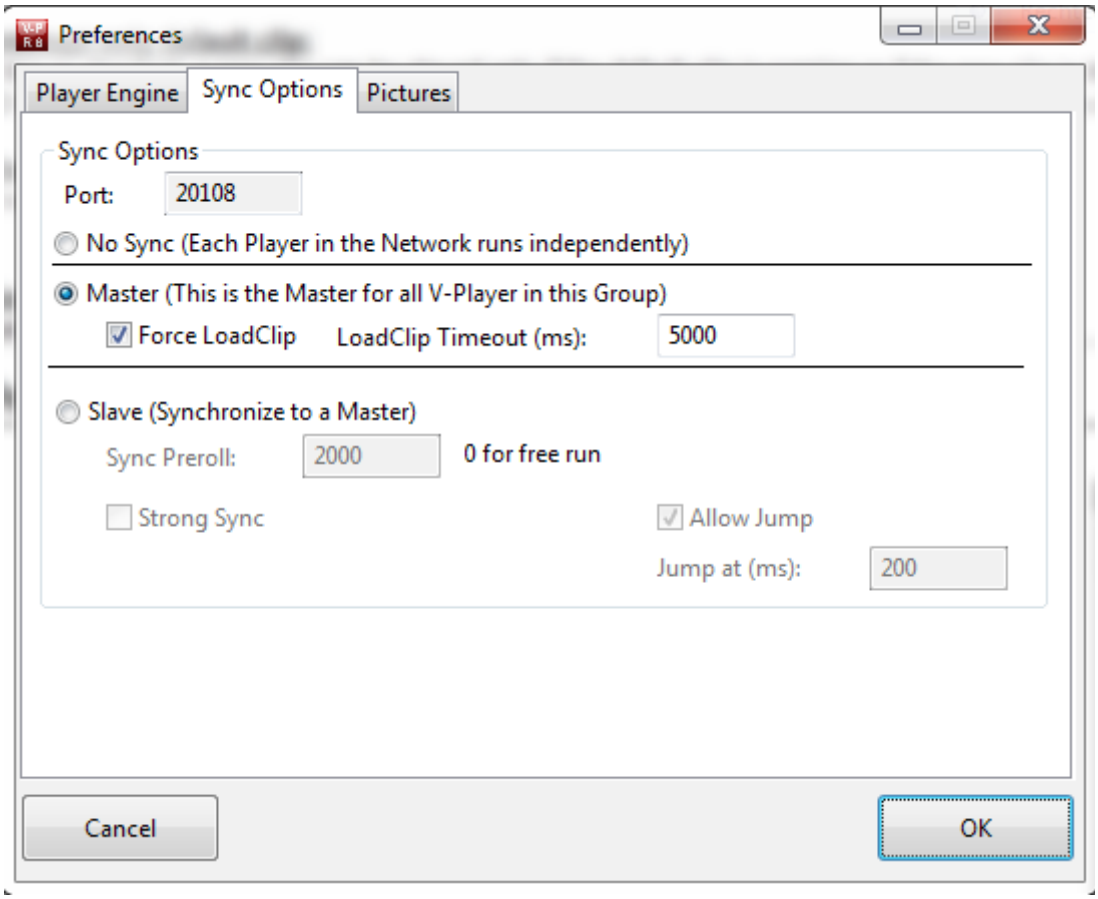
Aspect Ratio

Determines the aspect ratio of the Video files.

Sound Output

Select Analog output via 3,5 mm stereo jack or digital output via HDMI.

Sync Options



As explained before, V-Player has a self synchronizing option. To play videos from several players in sync, one machine has to be defined as master. To do so, select the Master option. For all other players in that group set the Slave option. If synchronization is not needed set the No Sync option.

Force LoadClip

If that option is set, the master and the slaves load the clip, but does not play it immediately. The master waits until all slaves have acknowleged the LoadClip command and then send the play command. This results in a more precise synchronized start. The LoadClip Timeout determines the maximum time the master will wait for the slave acknowledge.

Strong Sync

Slaves in Strong Sync Mode will permanently adjust their position to stay in sync with the Master. If Strong Sync is deselected, the slaves adjust their position only if it is more then 16 milliseconds away from the master position.

Sync Preroll

Should be somewhere between 1000 and 3000 and determines the time in milliseconds before the synchronization starts. If 0, the slaves get only the play command together with the master, but will not take care if they stay in sync.

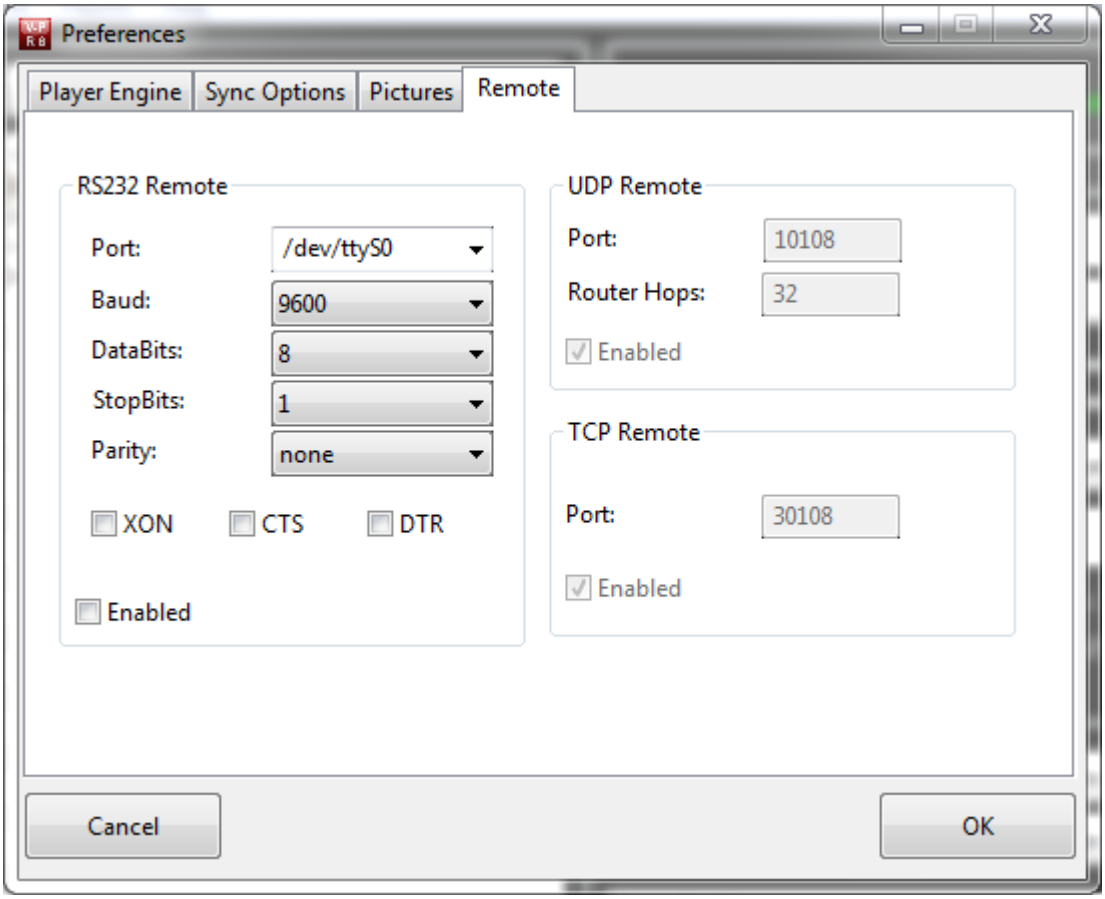
Allow Jump

Determines if the player may jump to stay in sync quicker.

Jump At

Tells V-Player at what amount of time difference between master and slave it should jump to synchronize. If the synchronization error is less than this value, the slave will try to stay in sync by changing its playback speed.

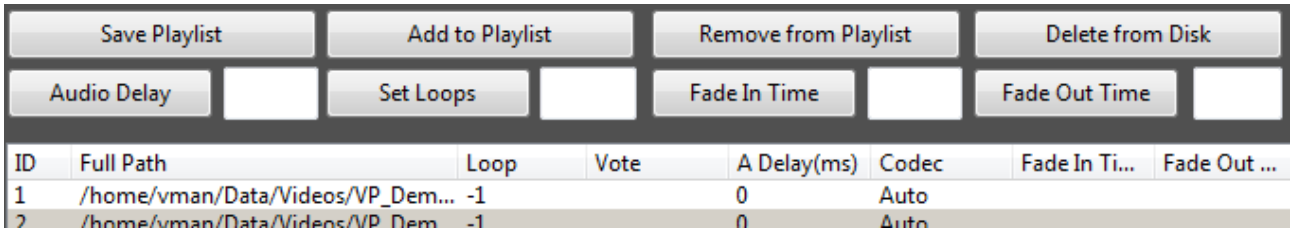
Remote



V-Player has three build in remote options. It is controllable via RS232, TCP or UDP. The UDP and TCP option is allays enabled, because they are essential for the device. Usually there is no need to change anything at the TCP and UDP parameters, so we make them only visible, not changeable. If, for any reason, one need to change those values it, is possible by editing v-player.ini on the V-Player box.

The RS232 remote option is often used by small micro controllers like V-IO. Those controllers can direct connect via USB (virtual commport) or a physical commport. If the controller only offers a physical commport, a USB - RS232 adapter is needed.

Playlist Control Panel



The Play list Control Panel offers clip modification commands. Enter a value in the input field and press the associated button (e.g. Audio Delay). The entered value is then assigned to all selected clips.

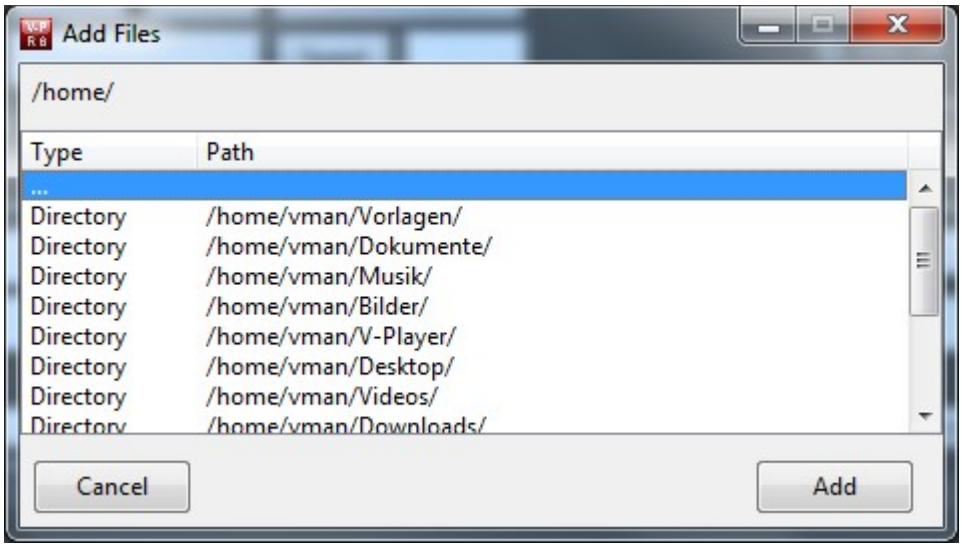
To change the file order in the play list use drag and drop.

Save Playlist

Save the Play list

Add to Playlist

To add files to the playlist, select Play list -> Add Files... in the main menu or click the "Add to Playlist" button. The Add Files dialog opens and shows the local directory of the selected V-Player box.



Note: All files and directories listed by the Add Files dialog are local files of the V-Player box. You will not see or can change to the local file system of your Remote PC.

It is also possible to remove selected files from the disk by pressing the "Delete from Disk" button.

Remove from Playlist

To remove files to the play list click this button

Delete from Disk

This button does the same as the "Remove from Playlist" button with one important difference. In addition of removing files from the playlist it deletes the files on the disk.

Audio Delay

In some file formats it might happen that the audio and video is not perfectly synchronized. Use the Audio Delay parameter for the selected items in the play list to delay (negative values) or accelerate the audio in comparison to video. The delay has to be entered in milliseconds.

Loops

To loop a file enter the number of loops. -1 means no loop, 0 means endless loop.

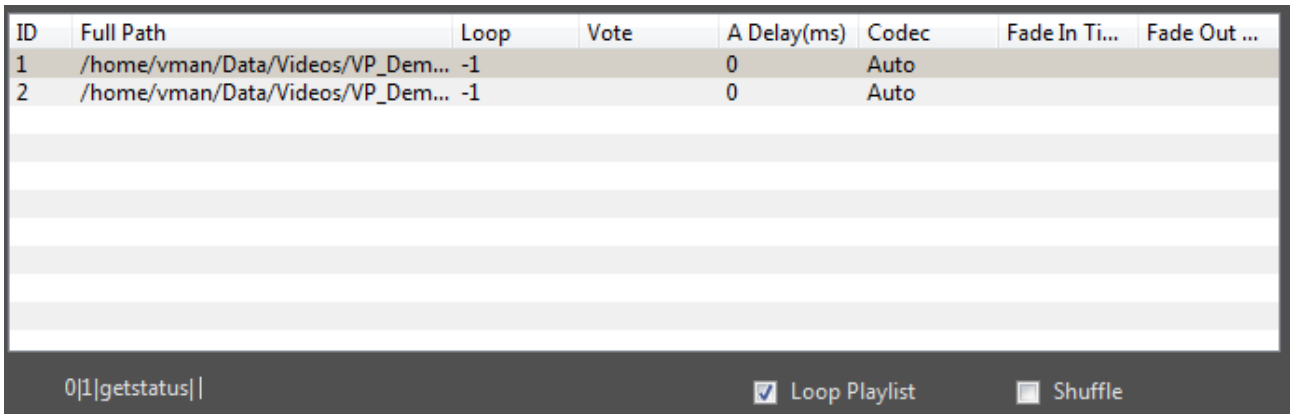
Fade In Time

Determines the fade in time in ms. The video will fade from black in the given Time.

Fade Out Time

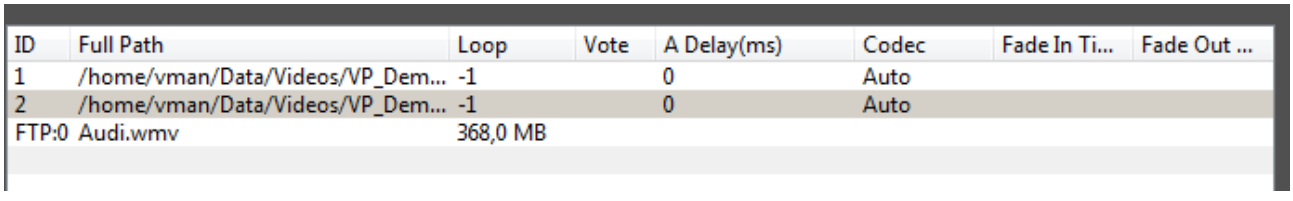
Determines the fade on time in ms. The video will fade to black in the given Time. This is very useful if a loop has to be interrupted clean.

Playlist



Only files that are in the Playlist are accessible. Files that are stored on the disk but not listed here are not accessible for the Player. To add files here that are stored on the disk use the "Add to Playlist" button (see Playlist Control Panel). Playlist items can be re-arranged by drag and drop.

To add files that are accessible for your control computer that is running V-Player Manager, just drop them here.



As soon as one or more files dropped here, V-Player Manager start to copy the files to the Player. This is indicated by a byte counter showing the amount of data that was transferred. During this time the Player Access Panel and some buttons on the Player Control panel are disabled. If the transfer is completed, the files are stored in the Playlist and are accessible immediately.

In the case of an error a message box pops up to show which file was not transferred.

Shuffle

Playlist is played in shuffle mode

Loop Play list

If checked the play list will start from top again if finished.

Player Access Panel

This panel is used to Manage all the Player in the Network and make them accessible for V-Player Manager.

Detect Player

If you start with a new configuration this button fills the list of available devices automatic. This is very useful if the players are running with DHCP configuration (which is not the default) and their IP Addresses are unknown. Note: This works only for players that are in the same Network as the V-Player Manager control computer.

To add V-Players to the list manually or modify existing ones there are some controls at the bottom of the list.

IP Address and Name

These two input fields work together. To add a Player to the list, at least its IP Address is needed. The Name is optional and can be used to make it easier to find a Player. The name can be something about the players function or content he is playing. If a Player is selected in the list, all its values are populated in the entry fields at the bottom of the list. To change the name, select the Player, edit the value in the "Name" field and click "Add/Upd".

Add/Upd.

Adds a Player with the entered IP Address and name to the list. If there is a Player with that IP Address, it only assigns the name. Note: It is not possible to change the IP Address here.

Del

Deletes the all selected items from the list.

Role and Group

The "Role" specifies the mode in that the Player is running. If the selected Player has the Master Role it is the sync Master for all Slaves in his group. A Player in the Slave Role will listen to the Master of his Group. A Player wit No Role runs alone.

The "Apply" button assigns the Role and the Group to all selected Devices. To Setup a Master-Slave Group click the Device that is desired to be the Master, select a Group and the Master Role and click "Apply". Then select the Devices that have to be Slaves, select the same Group and select the Slave Role. Click "Apply" and you're done.

Note: Each Player is part of a group and will accept commands only if the IP address and the selected group is correct. By default, each player is in group 0. However, if the player is in another group than 0, it will always accept commands from group 0.

Example:

Player in group 0 accept commands to group 0

Player in group 1 accept commands to group 0 and group 1

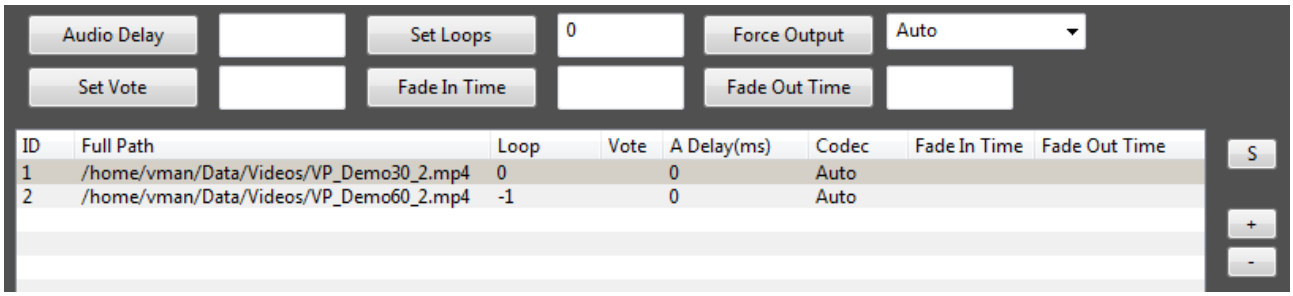
Player in group 2 accept commands to group 0 and group 2

Status Panel

This panel shows the TCP traffic to and from the Player. For time consuming operations a progress bar is used.

Loops

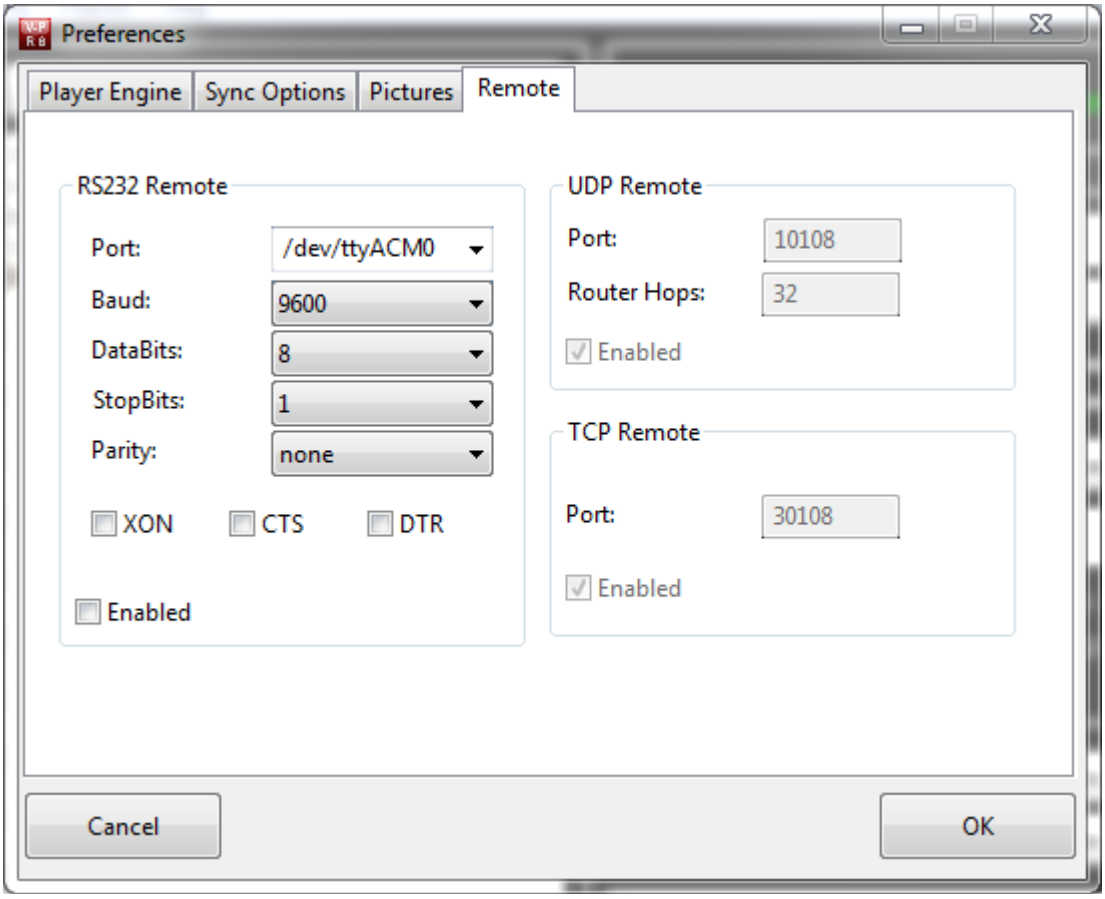
To loop a single clip enter the number of loops in the play list. A value of 0 means endless loop, a value of -1 means no loop.



This is also the only way to play seamless loops. If you want to play seamless loops synchronized with other V-Player boxes you need to set the loop parameter in each V-Player Slave box in the same way then in the Master.

V-IO Integration

To attach V-IO or any other RS232 Device, first make sure that the device is attached an powered. V- Player has build in drivers for most RS232-USB converters in the market.



If the device is attached to one of the USB ports (in this case V-IO), click the "Preferences" button in the Player control Panel. Select the Remote Tab. In the drop down box "Port" select "dev/ttyACM0". The default settings are as on the screen shot above. Check the "Enabled" box and click "OK"

License Management

The base of V-Player 6 is an open source Linux operating system, but the V-Player 6 application is proprietary software. For this reason, V-Player 6 runs in demo mode if no valid license is found on the system. Demo mode means that, after one hour of operating, a message box appears on the screen telling that demo mode is active.

Every sold V-Player box comes with a valid license. The license is bound to the systems Hardware ID's and is part of the operating system. For that reason, you can not make an image from the V-Player disk and restore that image to another computer to become a V-Player (of course you can, but you can not copy your license).

Reasons to buy a License only

If you live in a country where hardware is usually cheaper than in Germany, you can buy the V-Player hardware from a local reseller. Another reason could be high customs duties. In that case you can download an image and write it to the purchased hardware. As mentionend, V-Player will not find a valid licence and run in demo mode in that case, but the software has a function to generate the hardware ID's. From these ID's we can generate a valid license which you can import to make the demo mode disappear.

Porting V-Player to other Hardware

In General, all V-Player images should work on every computer equipped with a NVIDIA graphics card, but some functionality depends on the configuration of the underlying operating system and some configuration files in the V-Player directory. If you want to run V-Player on hardware for which we do not provide an image, please contact our forum for help.

Reasons to Export and Import a License

If we provide updates, in most cases it is sufficient to replace the original V-Player application with the update. Updates are available at http://vman.cc/downloads .You can update without losing your license in this case. However, sometimes it might be neccessary to write a new image to the disk. In that case, the license get lost. To prevent this, export the licence and save it, write the new disk image and import the license.

Another reason could be that you want to reset the V-Player Box in its delivery state. In that case write the original disk image back and import the previously exported license.

Getting V-Player Disk Images

V-Player disk images can be found at http://vman.cc/downloads . It is very important that you download the disk image that is suitable for your hardware.

Getting, Setting and Requesting Licenses

The License management is part of V-Player and V-Player Manager. If you have a working V-Player that is accessible via V-Player Manager, all license related stuff can be done with the manager. If you have no chance to connect via manager, all functionality mentioned is available at V-Player itself. In that case you need to connect a keyboard and mouse to the V-Player box.

Getting the current License via V-Player Manager

Open V-Player Manager and connect to the Player. In the manager main menu select *License → Get License*. Select a location to store the license.

Getting the current License from V-Player direct

Connect a keyboard and mouse to the player. If the player is operating and a video is shown in full screen, press *ALT+Tab* to until the V-Player application is visible. In the V-Player main menu select *Edit → Export License*. Select a location to store the license.

Setting the License via V-Player Manager

Open V-Player Manager and connect to the Player. In the manager main menu select *License → Set License*. Select a file containing the license.

Setting the License via V-Player direct

Connect a keyboard and mouse to the player. If the player is operating and a video is shown in full screen, press *ALT+Tab* to until the V-Player application is visible. In the V-Player main menu select *Edit → Import License*. Select a file containing the license.

Getting a License Request via V-Player Manager

Open V-Player Manager and connect to the Player. In the manager main menu select *License → Generate License Request*. Select a location to store the license. Email us this request file and after purchasing, we send you a valid license file.

Getting a License Request via V-Player direct

Connect a keyboard and mouse to the player. If the player is operating and a video is shown in full screen, press ALT+Tab to until the V-Player application is visible. In the V-Player main menu select Edit → Generate License Request Info. Select a location to store the license. Email us this request file and after purchasing, we send you a valid license file.

Remote Protocol

To control V-Player by a media control system like V-Control or Medialon, a plain, easy to use ASCII protocol is implemented. The command string is composed as follows:

`PlayerGroup|PlayerID|Command|Parameter<CR>`

PlayerGroup:

Each player is a member of at least one group, the group 0. A command sent to the group 0 is accepted by all players in the network. To make V-Player units individual accessible, you can add them to an extra group, e.g. 1. A command sent to units with the group 1 is only accepted by V-Players in that particular group. However, a command sent to group 0 is also accepted by units with a group > 0. To send a command to Player units that are members of different groups, just send a comma separated list with group IDs (e.g. 1,2,34,56,57). You can use an unlimited number of groups, and depending what you want to do it can be useful to give every player an individual group ID.

PlayerID:

allways 1 (for later extensions)

Command:

The command that is sent to the player (i.E. Play)

Parameter

Some commands need a parameter to work properly

|:

Seperator

<CR>:

ASCII Code 13 (Return / Enter key)

Commands:

CueUp

Set the addressed players to the submitted timecode.

`GroupIDs|PlayerIDs|CueUp|Timecode<CR>`

Example:

CueUp all players wich are members of the groups 3,4,23.

`3,4,23|1|CueUp|00-05-00-10<CR>`

Acknowledge:

OK<CR> if successful.

FadeIn

Fade in a running clip

`GroupIDs|PlayerIDs|FadeIn|Time<CR>`

Example:

Fade in all players which are members of the groups 3,4,23. FadeIn Time is 1500 ms (1.5 s)

`3,4,23|1|FadeIn|1500<CR>`

Acknowledge:

OK<CR> if successful

FadeOut

Fade out a running clip

`GroupIDs|PlayerIDs|FadeOut|Time<CR>`

Example:

Fade Out all players which are members of the groups 3,4,23. FadeOut Time is 1500 ms (1.5 s)

`3,4,23|1|FadeOut|1500<CR>`

Acknowledge:

OK<CR> if successful

FullScreen

Set the addressed player to full screen

`GroupIDs|PlayerIDs|FullScreen|Mode<CR>`

Mode: 0=Off; 1=On

Example:

Set all players in the network to full screen.

`0|1|FullScreen|1<CR>`

Acknowledge:

OK<CR> if successful.

GetClipProperties

Request the current player status.

`GroupIDs|PlayerIDs|GetClipProperties<CR>`

The player returns the string

`VideoInfo<CR>AudioInfo<CR>VolumeLevel<CR>OSDLevel<CR>MuteState<CD>`
`LoopPlaylist<CR>Shuffl eMode<CR>FullScreen<CR>`

Example:

`0|1|GetClipProperties<CR>`

Acknowledge:

H264 30 fps 10000 k Bit<CR>

AAC 16 Bit 48000 Hz 2 Channels<CR>

87<CR>

0<CR>

0<CR>

1<CR>

0<CR>

1<CR>

GetCurrentClipID

Request the current clip.

`GroupIDs|PlayerIDs|GetCurrentClipID<CR>`

Example:

`0|1|GetCurrentClipID<CR>`

Acknowledge:

5<CR>

GetDurationTC

Request the duration of the current clip.

`GroupIDs|PlayerIDs|GetDurationTC<CR>`

Example:

`0|1|GetDurationTC<CR>`

Acknowledge:

00-10-13-12<CR>

GetPlayList

Send the current playlist

`GroupIDs|PlayerIDs|GetPlaylist<CR>`

Example:

`2|1|GetPlaylist<CR>`

Acknowledge:

1:Playlist item<02>

2: Playlist item<02>

...

n: Playlist item n<02>

<CR>

<02>: The playlist items are seperated by ASCII code 2

GetStatus

Request the current player status.

`GroupIDs|PlayerIDs|GetStatus<CR>`

The player returns the string "getstatus"<CR>CurrentPosition<CR>Duration of current clip<CR>

Example:

`0|1|GetStatus<CR>`

Acknowledge:

getstatus<CR>

00-01-05-15<CR>

00-15-12-20<CR>

GetTC

Request the current position.

`GroupIDs|PlayerIDs|GetTC<CR>`

Example:

`0|1|GetTC<CR>`

Acknowledge:

00-01-13-12<CR>

GetVolume

Request the current volume level.

`GroupIDs|PlayerIDs|GeVolume<CR>`

Example:

`0|1|GetVolume<CR>`

Acknowledge:

85<CR>

LoadClip

Loads a movie to the addressed player

`GroupIDs|PlayerIDs|LoadClip|Parameters<CR>`

Parameters:

The parameters is a semicolon separated list of parameters. currently, It contains the ClipID (this is the id in the playlist), followed by five semicolons (;).

Example:

`1|1|LoadClip|12;;;;;<CR>`

Players in Group 1 load clip 12

Acknowledge:

OK<CR>

LoadPlaylist

Load a playlist

`GroupIDs|PlayerIDs|LoadPlaylist|Playlistpath/playlistname.lst<CR>`

Example:

`1|3|LoadPlaylist|/home/vman/Documents/MyPlaylist.lst<CR>`

Acknowledge:

OK<CR> if successful.

LoopPlaylist

Set the addressed players playlist-loop mode (if "1", the playlist will loop, if "0" the player stops playing at the end of the playlist.

`GroupIDs|PlayerIDs|LoopPlaylist|Mode<CR>`

Mode: 0=Off; 1=On

Example:

Set Loop Mode On

`0|1|LoopPlaylist|1<CR>`

Acknowledge:

OK<CR> if successful.

Mute

Mute Audio

`GroupIDs|PlayerIDs|Mute|Mode<CR>`

Mode: 0=Off; 1=On

Example:

Mute On

`0|1|Mute|1<CR>`

Acknowledge:

OK<CR> if successful.

NextClip

Jump to the next clip in playlist

`GroupIDs|PlayerIDs|NextClip<CR>`

Example:

`1|3|NextClip<CR>`

Acknowledge:

OK<CR> if successful.

Pause

`GroupIDs|PlayerIDs|Pause<CR>`

Example:

`1|1|Pause<CR>`

Acknowledge:

OK<CR> if successful.

Play

`GroupIDs|PlayerIDs|Play<CR>`

Example:

`1|1|Play<CR>`

Acknowledge:

OK<CR> if successful.

PlayClip

Load a movie and play immediately

`GroupIDs|PlayerIDs|PlayClip|Parameters<CR>`

Parameters:

The parameters is a semicolon separated list of parameters. currently, It contains the ClipID (this is the id in the playlist), followed by five semicolons (;).

Example:

`1|1|PlayClip|12;;;;;<CR>`

Players in Group 1 play clip 12

Acknowledge:

OK<CR> if successful.

Reboot

Reboot the Player

`GroupIDs|PlayerIDs|reboot<CR>`

Example:

`0|1|reboot<CR>`

Acknowledge:

OK<CR> if successful.

PrevClip

Jump to the previous clip in playlist

`GroupIDs|PlayerIDs|PrevClip<CR>`

Example:

`1|3|PrevClip<CR>`

Acknowledge:

OK<CR> if successful.

SavePlaylist

Save a playlist

`GroupIDs|PlayerIDs|SavePlaylist|Playlistpath/playlistname<CR>`

Example:

`1|3|SavePlaylist|/home/vman/Documents/MyPlaylist<CR>`

Acknowledge:

OK<CR> if successful.

SetNextClip

Determines the next clip that is played when the current clip is over. With this command it is possible to jump to a new playlist location after the current clip is finished.

`GroupIDs|PlayerIDs|SetNextClipClip|ClipIDInPlaylist<CR>`

Example:

`0|1|SetNextClip|8<CR>`

Acknowledge:

OK<CR>

SetPlaylistFile

This command changes the playlist content. The current content will be deleted and exchanged by the items given in the parameter. Note: This command does not change the saved playlist file, it only changes the playlist in RAM. If you want to use the new playlist later, you have to send a SavePlaylist command.

`GroupIDs|PlayerIDs|SavePlaylistFile|Filename1<CR>Filename2<CR>....`

Example:

`1|3|SavePlaylistFile|/home/vman/Videos/movie1.mov<CR>/home/vman/Videos/movie2.mov<CR>/home/ vman/Videos/movie3.mov<CR>`

Acknowledge: OK<CR> if successful.

SetVolume

Set the volume level of the addressewd playeres. Valid range is 0-255

`GroupIDs|PlayerIDs|SetVolume|Wert<CR>`

Example:

`1|1|SetVolume|128<CR>`

Acknowledge: OK<CR> if successful.

Shuffle

Play random

`GroupIDs|PlayerIDs|Shuffle|Mode<CR>`

Mode: 0=Off; 1=On

Example:

`0|1|Shuffle|1<CR>`

Acknowledge: OK<CR> if successful.

Shutdown

Shutdown the Player

`GroupIDs|PlayerIDs|shutdown<CR>`

Mode: 0=Off; 1=On

Example:

`0|1|shutdown<CR>`

Acknowledge:

OK<CR> if successful.

VideoPosition

Position the video window

`GroupIDs|PlayerIDs|VideoPosition|Positions<CR>`

Example:

`1|1|VideoPosition|10,50,800,600<CR>`

Acknowledge: OK<CR> if successful.

Quit

Close the Player

`GroupIDs|PlayerIDs|Quit<CR>`

Example:

`0|1|Quit<CR>`

Acknowledge: OK<CR> if successful.